NAME:…… **INDEX NO:**……

SCHOOL:…….. **DATE:**……

SIGN:……..

232/2
BIOLOGY
PAPER 2
THEORY
JULY / AUGUST - 2012
TIME: 2 HOURS

MARAKWET WEST DISTRICT JOINT EVALUATION TEST– 2012 (MAWESSE)
Kenya National Examination Council (K.C.S.E)

232/2
BIOLOGY
PAPER 2
THEORY
JULY / AUGUST - 2012
TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES

1. Write your name and Index number in the spaces provided.
2. Sign and write the date of examination in the spaces provided
3. This paper consists of two sections A and B
4. Answer all the questions in section A in the spaces provided.
5. In section B answer question 6 (Compulsory) and either question 7 and 8 in the spaces provided after question 8.

FOR EXAMINERS USE ONLY

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE SCORE
A	1	8	
	2	6	
	3	10	
	4	8	
	5	8	
B	6	20	
	7	20	
	8	20	
	TOTAL	80	

This paper consists of 12 printed pages. Candidates should check the question paper to ensure that all pages are printed as indicated and that no questions are missing.

SECTION A (40 MARKS)

1. a) State **three** structural differences between arteries and veins (3 mks)

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b) List **two** factors that aid in blood flow through the veins (2 mks)

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c) Name the proteins in the blood which are responsible for determining the blood group of a person (2 mks)

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d) In a certain person, blood took long time to clot after a cut. What vitamin deficiency was the person likely to have been suffering from? (l mk)

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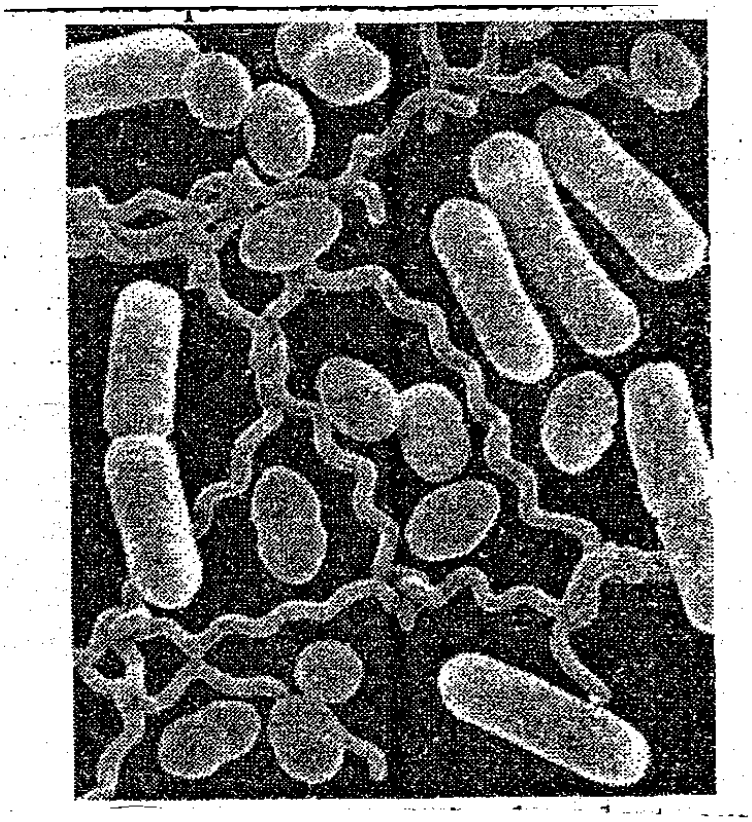
2. The photograph below shows bacteria cells as seen under a scanning electron microscope. Study the photograph and answer the questions that follow.



a) To which kingdom does bacterium belong? (l mk)

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b) State **two** distinguishing features of members of the kingdom named in (a) above (2 mks)

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c) Label any **three** types of bacterial shapes seen in the photograph (3 mks)

d) Name the bacteria that cause each of the following diseases (2 mks)

i) Syphilis —

ii) Typhoid —

3, In a family 'with four children the father had blood group A while the mother had blood group B. one of the children had blood group O.

(a) (i) What were the genotypes of the parents. (l mk)

Mother ……

Father……

(ii) What was the genotypes of the child with blood group O. (l mk)

(b) Work out the genotype of the other children. (4 mks)

(c) Which child can receive blood from any member of the family. (l mk)

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(d) State the percentages of children who can donate blood to all blood groups. (l mk)

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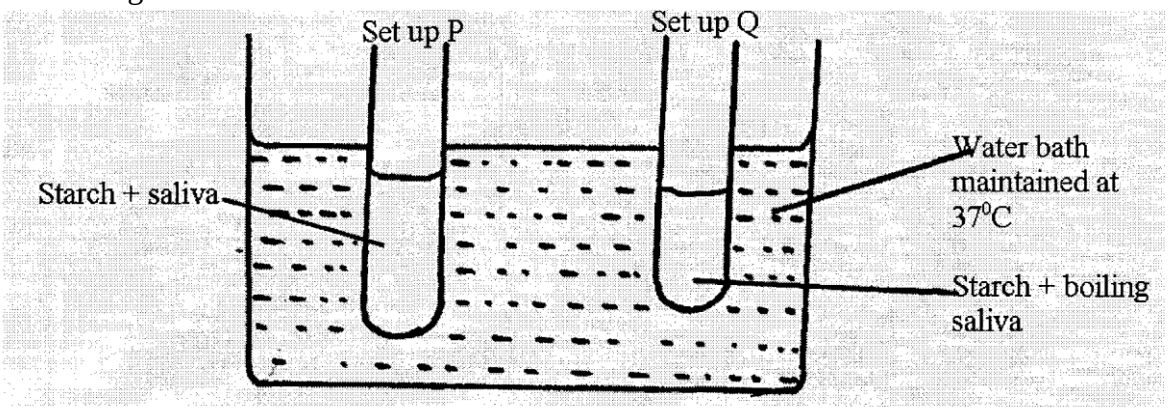
4. In an experiment to investigate an aspect of digestion, two test tubes P and Q were set up as show in the diagram below.



The test tubes were left in the bath for 30 minutes. The content of each test tube was then tested for starch using iodine solution.

a) What was the aim of experiment? (l mk)

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b) What results were expected in test tube P and Q (2 mks)

P

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Q

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c) Account for the results you have given in b above in test tube P and Q (2 mks)

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d) Why was the set up left at 37°C (l mk)

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e) Name the carbohydrate stored in (2 mk)

(i) Mammalian liver

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(ii) Potato tuber

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5. What is meant by the following terms?

(i) Adaptive radiation (l mk)

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(ii) Vestigial structures (l mk)

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(b) Evolution is an ongoing process. State two pieces of evidence which suggest that evolution is still taking place. (2 mks)

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(c) Explain how the following factors influence natural selection.

(i) Predators (2 mks)

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(ii) Diseases (2 mks)

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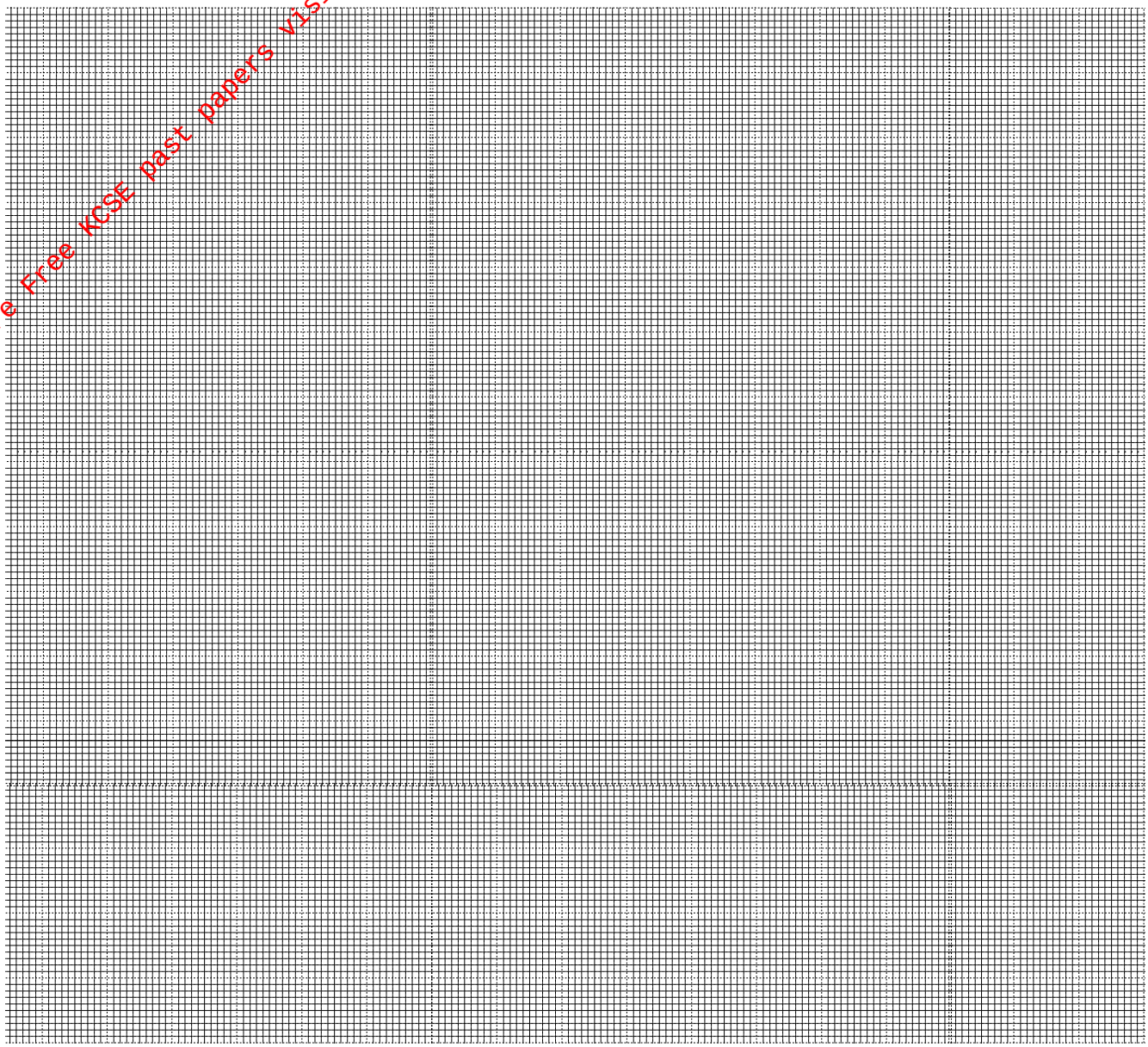
SECTION B (40 MARKS)

Answer question 6 (compulsory) and either question 7 or 8 in the spaces provided after question 8.

6. In an experiment to investigate certain processes in a given plant species, the rates of Carbon (iv) oxide released and intake were measured over a long period of time. The results of the investigation were as shown below.

Time of the day (hours)	6	8	10	12	14	16	18	20	22	24
Volume of Carbon (iv) oxide consumed (mm^3/ mm	10	43	69	91	91	50	18	0	0	0
Volume of Carbon (iv) oxide released (mm^3/ mm	38	22	10	3	3	6	31	48	48	48

a) On the same axes draw graphs of volume of Carbon (iv) oxide consumed and released against time. (7 marks)



b) Name the chemical process changes represented by:

(i) Carbon (iv) oxide consumed. (1 mark)

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(ii) Carbon (iv) oxide released. (1 mark)

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c) Account for the shape of the curve for:

(i) Carbon (iv) oxide consumed. (3 marks)

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(ii) Carbon (iv) oxide released. (3 marks)

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d (i) What is meant by compensation point. (l mk)

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(ii) From the graph, find the time of day when the plants attained compensation point. (2 mks)

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e) Explain how temperature affects the rate of carbon (iv) oxide consumption in the plant. (2 mks)

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7. (a) Describe the adaptation of floating water lily leaf to its photosynthetic function. (l0 mks)

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(b) Describe the activities that take place in the chioroplast of growing plants. (l0 mks)

8. Describe the structure and function of the mammalian ear in relation to hearing and balance (20 mks)

END